AMENDMENTS TO THE CLAIMS

Please replace the pending claims with the following listing of claims:

1-20. **(Canceled)**

21. **(Previously Presented)** A fabrication method of an optical fiber using as a core material tellurite glass having a zero-material dispersion wavelength equal to or greater than 2 μm and having a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are

$50 < TeO_2 < 90$ (mol%)

$1 < Bi_2O_3 < 30$ (mol%) and

$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%),

wherein said fabrication method of the optical fiber comprises:

a first process of molding a polygon columnar glass preform from a tellurite glass melt with said composition and said components, by using a mold having a plurality of convex portions which run parallel to each other in a longitudinal direction; and

a second process of inserting said glass preform produced in said first process into a cylindrical jacket tube comprised of tellurite glass, and of carrying out fiber drawing under pressure so as to maintain or enlarge air holes which are gaps generated between said glass preform and said jacket tube.

22. (**Withdrawn**) The fabrication method of the optical fiber as claimed in claim 21, wherein said first process comprises:

an act of molding the tellurite glass melt with said composition and said components into a mold having a plurality of convex portions which run parallel to each other in a longitudinal direction on an inner wall, the inner wall being conically enlarged towards a bottom of the inner wall; and

an act of pouring core glass melt composed of tellurite glass with said composition and said components into the mold so as to fabricate the glass preform whose core glass has conically suction molded by the volume contraction of the cladding glass; and

an act of taking out a glass from the mold after the glass has cooled by taking the mold to pieces, thereby obtaining the glass in the mold, wherein the glass is a glass preform which has a plurality of parallel concave portions along a longitudinal axis on the side surface and a polygoned column having a plurality of concave portions on the periphery thereof from the top of the glass preform to a halfway point along a long side of the glass preform and having a conical portion from the halfway point to the bottom of the glass preform; and

wherein said second process comprises:

an act of cutting off said conical portion from said glass preform produced by said first process;

an act of inserting the polygon columnar portion of the glass preform into the cylindrical jacket tube composed of tellurite glass, the polygon columnar portion having a plurality of concave portions that longitudinally extend parallel to each other; and

an act of carrying out the fiber drawing under pressure so as to maintain or enlarge air holes.

23. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 21, wherein said first process comprises:

an act of molding the tellurite glass melt with said composition and said components into a mold having a plurality of convex portions which run parallel to each other in a longitudinal direction on an inner wall, the inner wall being conically enlarged towards a bottom of said inner wall from a halfway point along the side of the inner wall in a longitudinal direction, the bottom of said mold having a hole;

an act of pouring core glass melt comprised of tellurite glass with said composition and said components into the mold so as to fabricate the glass preform whose core glass has been conically suction molded by volume contraction of the cladding glass and by causing the cladding glass to flow out of said hole volume contraction of the cladding glass and by causing the cladding glass to flow out of said hole; and

an act of taking out a glass piece from the mold after the glass has cooled by taking the mold to pieces, thereby obtaining the glass in the mold, wherein the glass is a glass preform which has a polygonal column with a plurality of parallel concave portions that longitudinally extend parallel to each other to form a polygon columnar having a plurality of concave portions from the top of the glass preform to a halfway point to a long side of the glass preform and having a conical portion from the halfway point down the bottom of the glass preform; and

wherein said second process comprises:

an act of cutting off said conical portion from said glass preform produced by said first process;

an act of inserting the polygon columnar portion of the glass preform into the cylindrical jacket tube composed of tellurite glass, the polygon columnar portion having a plurality of concave portions that longitudinally extend parallel to each other; and

an act of carrying out the fiber drawing under pressure so as to maintain or enlarge air holes.

24. **(Canceled)**

25. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 23, wherein said second process includes vacuum degassing through said hole to cause said cladding glass to flow out of said hole.

26. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 21, wherein said first process comprises the act of forming a glass preform having air holes by boring holes in a longitudinal direction of said glass block.

27. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 21, wherein said first process comprises the act of forming a preform having air holes formed by pouring tellurite glass melt with said composition and said components into a mold having a jig, the jig including a plurality of cylindrical rodlike pins disposed on its internal vase and then extracting said jig.

28. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 22, wherein said mold has four convex portions which run parallel to each other in the longitudinal direction on the inner wall, and the cladding of said optical fiber has four air holes.

29. **(Withdrawn)** The fabrication method of the optical fiber as claimed in claim 23, wherein said mold has four convex portions which run parallel to each other in the longitudinal direction on the inner wall, and the cladding of said optical fiber has four air holes.

30. **(Currently Amended)** The fabrication method of the optical fiber as claimed in claim 21, wherein said first process comprises:

an act of pouring the tellurite glass melt into the mold and allowing the glass melt to harden; and

an act of removing the hardened glass melt from the mold ~~by breaking up the mold~~, the resulting preform extending longitudinally from a first end to a spaced apart second end, the preform having a plurality of concave portions which run parallel to each other between at least a portion of the first and second ends so as to have a cross-sectional shape in the form of a cross; and

wherein said second process comprises:

an act of inserting said glass preform produced in said first process into the cylindrical jacket tube; and

an act of carrying out the fiber drawing under pressure so as to maintain or enlarge air holes.

31. **(Previously Presented)** The fabrication method of the optical fiber as claimed in claim 30, wherein said mold has four convex portions which run parallel to each other in the longitudinal direction on an inner wall, and a cladding of said optical fiber has four air holes.

32. **(Previously Presented)** A fabrication method of an optical fiber comprising:

a first process of forming a glass preform having a polygon columnar shape by:

pouring a glass melt into a cavity of a mold, the mold having an inner wall that defines the cavity and extends longitudinally between a first end and a spaced apart second end, the inner wall having a plurality of convex portions each extending longitudinally at least partially between the first and second ends, the glass melt comprising a tellurite glass having a zero-material dispersion wavelength equal to or greater than 2 μm and having a composition of TeO_2-Bi_2O_3-LO-M_2O-N_2O_3-Q_2O_5, where L is at least one of Zn, Ba and Mg, M is at least one alkaline element selected from Li, Na, K, Rb and Cs, N is at least one of B, La, Ga, Al and Y, and Q is at least one of P and Nb, and components of said tellurite glass are

$50 < TeO_2 < 90$ (mol%)

$1 < Bi_2O_3 < 30$ (mol%) and

$1 < LO + M_2O + N_2O_3 + Q_2O_5 < 50$ (mol%), and

removing the hardened glass melt from the mold once the glass melt has hardened, the hardened glass melt forming the glass preform; and

a second process of inserting the glass preform produced in said first process into a cylindrical jacket tube comprised of tellurite glass, and of carrying out fiber drawing under pressure so as to maintain or enlarge air holes which are gaps generated between the glass preform and the jacket tube.

33. **(Previously Presented)** The fabrication method of the optical fiber as claimed in claim 32, wherein removing the hardened glass melt from the mold comprises taking the mold.

34. **(Previously Presented)** The fabrication method of the optical fiber as claimed in claim 32, wherein the preform is formed so as to have a first end and a longitudinally spaced apart second end, the preform comprising a plurality of concave portions, each concave portion extending longitudinally at least partially between the first and second ends of the preform.

35. **(Previously Presented)** The fabrication method of the optical fiber as claimed in claim 34, wherein the preform is formed so as to have a cross-sectional shape in the form of a cross.

36. **(Previously Presented)** The fabrication method of the optical fiber as claimed in claim 32, wherein the inner wall of the mold has four convex portions, and the optical fiber has a cladding with four air holes.